Table 3–8. Summary of Surface Water Quality Criteria for Aquatic Species

Contaminant of Concern	Protective Acute Criteria (mg/L)	Protective Chronic Criteria (mg/L)	Source of Criteria
Ammonia	1.5 – 41.7[a]	0.17 – 4.13[b]	NRWQC; EPA 1999[c]
Copper	0.013[d,e]	0.009[d,e]	NRWQC; EPA 2002[f]
Manganese	2.3	1.78	Suter and Tsao 1996
Sulfate	N/A	N/A	No published criteria
Uranium	0.142	0.142	Suter and Tsao 1996

[a]Criteria are pH and life-stage dependent; early life stages are assumed to be present, and salmonids are assumed to be absent; range represents calculated criteria based on measured range of surface water pH values at the Moab site from 2000 to 2002 (Appendix D, SOWP; DOE 2003).
[b]Criteria are pH, temperature, and life-stage dependent; early life stages are assumed to be present and salmonids are assumed to be absent; range of values represents calculated criteria based on measured range of surface water pH values and temperature at the Moab site from 2000 to 2002 (Appendix D, SOWP; DOE 2003).
[c]National Recommended Water Quality Criteria (NRWQC) are based on EPA's ambient water quality criteria (EPA 1999).
[d]Criteria for metals are expressed in terms of dissolved metals in the water column.
[e]Criteria are expressed as a function of hardness (milligrams per liter) in the water column. The value listed corresponds to a hardness of 100 mg/L.
[f]National Recommended Water Quality Criteria are based on EPA's criteria (EPA 2002).
N/A = not available; no published criteria available. Note: measured background sulfate concentrations in the surface water range from 84 to 439 mg/L.

Because of terracing and lack of river access during regular high-flow events (less than 5-year occurrence), the floodplain is not considered an "active" floodplain. Most of the surface has been disturbed in the past by milling and soil borrow operations. Some areas are sparsely vegetated, and other areas are dominated by tamarisk. A small patch of mature cottonwoods exists in the northeastern portion of the site.

Courthouse Wash drains 102 square miles and empties into the Colorado River immediately upstream of the Moab site. Moab Wash, which drains approximately 5 square miles, runs through the middle of the site to the Colorado River.

Appendix F, "Floodplain and Wetlands Assessment for Remedial Action at the Moab Site," includes a more detailed description of floodplains at the Moab site.

3.1.9 Wetlands

Several areas below the tamarisk next to the Colorado River were investigated in February 2002 and were found to contain wetland plants and soils. Although their boundaries have not been formally delineated, these areas are jurisdictional wetlands. Neither the tamarisk areas or the vegetated margin of a holding pond for irrigation water qualify as wetlands.

The Matheson Wetlands Preserve, across the river from the Moab site, has a variety of wetland types that include emergent wetlands, shrub wetlands, cottonwood stands, and ponds. This 875-acre preserve contains the only sizable wetland remaining on the Colorado River in Utah. Appendix F includes a more detailed description of wetlands at the Moab site.

No wetlands are known to exist at any vicinity properties, but because desert environments often contain small, isolated wetlands, these properties would be examined for wetlands prior to construction.